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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,522	07/11/2005	Thomas Jacobsson	0110-039	5340

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EXAMINER	
CHAN, KAWING	
ART UNIT	PAPER NUMBER
2837	
MAIL DATE	DELIVERY MODE
12/04/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,522	JACOBSSON ET AL.	
	Examiner	Art Unit	
	Kawing Chan	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Amendments and Applicant Arguments submitted on 10/09/08 have been received and its contents have been carefully considered. The examiner wishes to thank the Applicant for the response to the Examiner's action and for amending the claims in the appropriate manner.

Claims 1-14 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1- 5, 8 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (US 5,831,193).

4. In Re claims 1, 4, 5, 8 and 12, with reference to Figures 1-5, 14 and 16- 18, Suzuki discloses a method and device (19) which is capable of generating different tones of a plurality of MIDI channels by using tone waveform samples (Abstract; Column 7, Lines 40-55), comprising:

- A memory (2, 3), containing a plurality of stored samples include tone color data (Column 7, Lines 25-33; Column 8, Lines 42-55);

- Means for calculating an output sample for each of a plurality of active voices using a plurality of samples selected from the stored samples for each of the active voices (9, Column 16, Lines 61-67; Column 17, Lines 1-12);
- The number of samples selected depends upon the number of active voices (Column 17, Lines 35-66; Column 18, Lines 14-25).

5. In Re claims 2 and 13, with reference to Figure 17, Suzuki teaches the selected samples decrease as the output sample calculation complexity increases (Column 18, Lines 14-25). The calculation complexity is depending on the total number of tones needed to be generated.

6. In Re claims 3 and 14, Suzuki teaches different number of waveform samples is applied to different tone generating channels for forming different tones (Column 9, Lines 44-67; Column 10, Lines 1-4; Column 12, Lines 30-38; Column 17, Lines 45-50). When the number of tones to be generated is excessive, the system reduces the number of waveform samples of each channel by lowering the waveform sample forming resolution (CC) (Column 17, Lines 57-66). Thus, the selected samples in different channels are reduced differently according to the CC designed to different channels. Therefore, the selected samples decrease non-linearly as the number of tones to be generated increases.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US 5,831,193) in view of Wang et al. (US 5,814,750).

9. In Re claim 6, Suzuki has been discussed above, but fails to disclose the output sample is adapted to multiply each selected sample with a respective filter coefficient obtained from a filter table.

10. However, with reference to Figures 2-6, Wang discloses a sound synthesis technique of an electronic musical instrument, wherein the output of a musical tone (209) is adapted to multiply the stored waveform samples (204) with a respective filter coefficient obtained from a filter table (210) (Column 9, 44-67; Column 10, Lines 1-10)

11. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Suzuki with the teachings of Wang, since it is known in the art to generate a tone with different pitch by re-sampling the waveform samples of the tone. The method of re-sampling a signal by convolving waveform samples with the impulse response of a low-pass filter is well known in the art. The modification would have yielded only predictable result to one of ordinary skill in the art at the time of the invention was made.

12. In Re claim 7, with reference to Figure 3, Wang teaches the filter table contains coefficients of a truncated sine function (Column 2, Lines 6-33).

13. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US 5,831,193) in view of Boudet et al. (US 2001/0045155 A1).

14. In Re claims 9 and 10, Suzuki has been discussed above, but fails to disclose the synthesizer is a portable device.

15. However, with reference to Figure 1, Boudet discloses a mobile phone (110) using a polyphonic MIDI synthesizer to generate and modify different instrument tones or melodies that can be played by the mobile phone (Paragraphs [0053-0056]).

16. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Suzuki with the teachings of Boudet, since it is known in the art to utilize synthesizer in mobile phone so as to be able to generate different musical tones and melodies as the ring tone.

17. In Re claim 11, Suzuki in view of Boudet discloses the claimed invention except for the portable device is not a pager. It would have been an obvious matter of design choice to use pager as the portable device, since applicant has not disclosed that using pager as the portable device solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a pager.

Response to Arguments

18. Applicant's arguments filed 10/09/08 have been fully considered but they are not persuasive.

19. In Response to Applicant's argument on the fourth paragraph of page 6, Suzuki discloses that the number of waveform samples (waveform sample forming resolution) to be arithmetically formed per predetermined unit time is dependent on, besides the calculation amount, a tone, a portion of a tone or the segment of a waveform (Abstract).

In other words, the number of waveform samples (waveform sample forming resolution) can be set differently in different tones, different portions of a tone or different segments of a waveform. Moreover, the number of waveform samples (waveform sample forming resolution) used in the reproduction of a tone is dependent on the total number of tones to be generated (Column 18 Lines 14-30) when the total number of tones to be generated is excessive.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

21. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kawing Chan whose telephone number is (571)270-3909. The examiner can normally be reached on Mon-Fri 9am-5pm.

23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kawing Chan
Examiner
Art Unit 2837

/Jeffrey Donels/
Primary Examiner, Art Unit 2837